LEXBIO – SHARED VOCABULARY RESOURCES FOR THE NCBO

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The Lexical Grid (LexGrid) represents a comprehensive set of software and services to load, publish, and access vocabulary or ontological resources. LexGrid provides a framework that:

1. Utilizes a single information model flexible enough to represent yesterday's, today's and tomorrow's vocabulary or ontological resources.
2. Provides standardized programming interfaces and tools to load and index content from various providers and allow applications and users to take advantage of this content where and when needed.
3. Provides architectural consistency and cohesion required to support large-scale adoption and use.
4. Leverages vocabulary standards specifications including the Object Management Group Lexicon Query Services (OMG-LQS) and Health Level Seven (HL7) Common Terminology Services (HL7-CTS).

A customized set of LexGrid-based programs are being developed to this framework that meet specific needs of the National Center for Biomedical Ontology (NCBO). This overarching project, titled 'LexBIO', is currently divided into two sub-projects.

The first sub-project is LexBIO Vocabulary Services. The goal of this project is to provide the ability to administer and access vocabulary and ontological resources in the NCBO environment. The LexBIO implementation shares a technology base with existing LexGrid applications, repositories, and model architecture. This base is then enhanced and extended according to requirements and use cases of the Center. Specific extensions include the ability to import resources defined to the open biomedical ontologies (OBO), Web Ontology Language (OWL), and Protégé Frame formats. The LexBIO service can host and administrate multiple ontologies and versions of ontologies as needed. LexBIO with the BioPortal provide the basis for Core 1 of NCBO activities used for managing and governing biomedical ontologies.

The second sub-project is the LexBIO Protégé OBO Plug-in. The goal of this project is to allow import of OBO 1.0 or 1.2 format files to a common meta-model in the Protégé ontology management and knowledge acquisition system. This enables ready access to view and edit OBO ontological resources within a Protégé-Frames environment.

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